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10/675,002	09/30/2003	Brian K. Campbell	EMC-03-046	5206

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EXAMINER	
ALPHONSE, FRITZ	

ART UNIT	PAPER NUMBER
2112	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/675,002	CAMPBELL ET AL.	
	Examiner	Art Unit	
	FRITZ ALPHONSE	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 January 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *6-9 and 14-20* is/are allowed.

6)☒ Claim(s) *1-5, 10-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response too the amendment filed on 1/13/2009. Claims 1-20 are pending.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-4 are rejected under 35 U.S.C. 101as being directed to method steps which can be practiced mentally in conjunction with pen and paper, therefore they are directed to non-statutory subject matter.

Specifically, as to claim 1, it is uncertain what performs each of the claimed method steps. Moreover, each of the claimed steps, inter alia, "receiving a data element including parity information; performing a parity check of the data element to determine whether the data element is valid; generating a CRC for the data element; and corrupting the generation of the CRC if the parity check performed determines that the data element is invalid." can be practiced mentally in conjunction with pen and paper. The claimed steps do not define a machine or computer implemented process (See MPEP § 2106). Therefore, the claimed invention is directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

> has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 10-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kleppel (U.S. Pat. No. 7,020,809).

As to claim 10, Kleppel (fig. 1) discloses a data transmission system (10) including: a transmission device (transmitter 12) for transmitting command data elements to a downstream device (data bus 15),the command data elements being generated and transmitted according to a predetermined protocol (col. 1, lines 40-59); and a reception device (20) for receiving response data elements from the downstream device (data bus 15), the reception device including a protocol checking device for checking at least one state of the response data elements to determine the validity of the at least one state of the response data elements (col. 2, lines 20-44).

As to claim 11, Kleppel (fig. 1) shows a system, wherein the at least one state of the response data elements includes a data structure of the response data elements (the receiver is provided with control functionality 28; col. 2, lines 51-62).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-2, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleppel (U.S. Pat. No. 7,020,809) in view of Parr (US Pub. 2002/0194571).

As to claim 1, Kleppel (figs. 1-2) show an error checking method comprising: receiving a data element including parity information (fig. 2 shows transmission device 100 including receiver 115); performing a parity check of the data element to determine whether the data element is valid (fig. 1; col. 1, lines 35-48); generating a CRC (note CRC generator 130) for the data element.

Kleppel does not explicitly teach corrupting the generation of the CRC if the parity check performed determines that the data element is invalid. However, the limitation is obvious and well known in the art, as evidenced by Parr (see paragraph [0023 and 0028]).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time of the invention to incorporate into Kleppel's communication apparatus the system and method of coding cyclic redundancy check bits, as disclosed by Parr. Doing so would provide a system for reducing interference between communications occurring on the same frequency in different beams of a satellite communications network.

As to claim 2, Kleppel (figs 1-2) discloses an error checking method further comprising transmitting the data element with the parity information and CRC to a downstream device over a transmission link (bus 15).

As to claims 12-13, Kleppel discloses a protocol checking device transmits a status signal to the transmission device to notify the transmission device of the invalidity. However, the

limitation is obvious and well known in the art, as evidenced by Parr (see paragraph [0023 and 0028]). See the motivation for the same reason disclosed in claim 1 above.

7. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleppel and Parr as applied to claims 1 and 6 above, and further in view of Hong (U.S. Pat. No. 5,903,301).

As to claim 3, Kleppel does not explicitly disclose transmitting an alarm signal to the downstream device if the generation of the CRC has been corrupted.

However, the limitation is obvious and well known in the art, as evidenced by Hong (col. 4, lines 20-44).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time of the invention to improve upon the apparatus for removing data, as disclosed by Hong. Doing so would provide an apparatus for removing unnecessary data in communication networks, in which, by removing the unnecessary data, the components of the receiving data (such as hardware and software) are protected.

As to claims 4-5, the dependent claims 4-5 included in the statement of rejection but not specifically addressed in the body of the rejection have inherited the deficiencies of the parent claim 1 and have not resolved the deficiencies. Therefore, they are rejected based on the same rationale as applied to the parent claim above.

Response to Arguments

8. Applicant's arguments filed 1/13/2009 have been fully considered but they are not persuasive.

Regarding claims 10 and 11, Applicant asserts that "Kleppel does not teach a transmission device for transmitting *command data elements"* to *a downstream device,* the

command data elements being generated and transmitted according to a predetermined protocol; and *a reception device* for receiving *response data elements"* from the downstream device, the reception device including *a protocol checking device for checking at least one state of the response data elements"* to determine the validity of the at least one state of the response data elements."

The examiner respectfully disagrees with the statement because Kleppel clearly discloses all the limitations of claims 10-11. Particularly Kleppel (fig. 1) shows a data transmission system (10) including a transmission device (transmitter 12) for transmitting command data elements to a downstream device (data bus 15), the command data elements being generated and transmitted according to a predetermined protocol (col. 1, lines 40-59); and a reception device (20) for receiving response data elements from the downstream device (data bus 15).

Further, Applicant asserts that Kleppel does not teach a protocol checking device for checking at least one state of the response data elements to determine the validity of the at least one state of the response data elements.

The examiner respectfully disagrees because Kleppel discloses a reception device including a protocol checking device for checking at least one state of the response data elements to determine the validity of the at least one state of the response data elements (col. 2, lines 20-44).

Regarding claim 1, Applicant asserts that "There is no teaching or suggestion in Parr of corrupting the generation of a CRC if the parity check performed determines that the data element is invalid. … the combination of Kleppel and Parr does not teach or suggest the invention recited in independent claim 1."

In that regard, the examiner respectfully disagrees because Kleppel clearly discloses the limitations: performing a parity check of the data element to determine whether the data element is valid (fig. 1; col. 1, lines 35-48); generating a CRC (note CRC generator 130) for the data element. In addition, the combination of Kleppel and Parr clearly teach and suggest the invention recited in independent claim 1 (see the rejection above).

Allowable Subject Matter

9. Claims 6-9, 14-20 are allowed.

Claim 6 is allowable because none of the cited references either singular or in combination discloses "a parity check device for checking the parity information of the data element to determine whether the data element is valid; a CRC generator coupled to the parity check device for generating a CRC for the data element; and an output device for transmitting the data element with the parity information and CRC to a downstream device over a transmission link; wherein the parity check device is operative to output a corruption signal to the CRC generator if the parity check device determines that the data element is invalid, to instruct the CRC generator to corrupt the CRC generation for that data element."

Claims 14-20 are allowable because none of the cited references either singular or in combination discloses "an input CRC checking device coupled to receive the data elements from the downstream device for checking the validity of received data elements based on a CRC associated with each received data element; a memory device coupled to the input CRC checking device for storing data elements received from the downstream device after the data elements have been processed by the input CRC checking device; and an output CRC checking device

coupled to receive the data elements from the memory device for checking the validity of the data elements based on the CRC associated with each data element."

Claims 7-9, 15-20 are allowable by virtue of dependency.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse, whose telephone number is (571) 272-3813. The examiner can normally be reached on M-F, 8:30-6:00, Alt. Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman, can be reached at (571) 272-3644.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-3824

Information regarding the status of an application may also be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Fritz Alphonse/

Examiner, Art Unit 2112

March 10, 2009